



Prevalence of *Artemisia* species pollinosis in western Poland: Impact of climate change on aerobiological trends, 1995-2004

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Abstract:

BACKGROUND: *Artemisia* species pollen represents a major cause of allergy in Central Europe. Variations in the pollen season, the influence of climate variables and the prevalence of pollinosis to it were analyzed in Poznan, in western Poland between 1995 and 2004. **METHODS:** A Hirst volumetric spore trap was used for atmospheric sampling. Pollination date trend analysis and Spearman correlation tests were performed. Skin prick tests (SPT) and allergen specific immunoglobulin (Ig)E antibody measurements were performed in 676 and 524 patients, respectively. **RESULTS:** The *Artemisia* species pollen season grew longer due to a clear advance in the starting day and only a slightly earlier end point; the peak day also came slightly earlier. Rainfall in the first fortnight of July highly influenced pollen season severity. Temperature was directly correlated with daily *Artemisia* species pollen levels; relative humidity was inversely correlated. Twelve percent of patients had a positive SPT reaction to *Artemisia* species. Their symptoms were rhinitis and conjunctivitis (15%), atopic dermatitis (15%), chronic urticaria (14.3%), bronchial asthma (2.4%), and facial and disseminated dermatitis (1.3%). Elevated specific IgE concentrations were detected in the sera of 10.1% of patients. **CONCLUSIONS:** *Artemisia* species pollen is an important cause of pollinosis in western Poland. Pollen season intensity is highly influenced by rainfall in the previous weeks. Trends towards earlier season starts and longer duration, possibly caused by climate change, may have an impact on the allergic population.

Source: <http://www.jiaci.org/summary/vol17-issue1-num194>
<http://www.ncbi.nlm.nih.gov/pubmed/17323862>

Resource Description

Exposure :

weather or climate related pathway by which climate change affects health

Air Pollution, Meteorological Factors, Precipitation

Air Pollution: Allergens, Interaction with Temperature

Geographic Feature:

resource focuses on specific type of geography

None or Unspecified

Climate Change and Human Health Literature Portal

Geographic Location:

resource focuses on specific location

Non-United States

Non-United States: Europe

European Region/Country: European Country

Other European Country : Poland

Health Impact:

specification of health effect or disease related to climate change exposure

Dermatological Effect, Respiratory Effect

Respiratory Effect: Asthma, Upper Respiratory Allergy

Resource Type:

format or standard characteristic of resource

Research Article

Timescale:

time period studied

Time Scale Unspecified